TPA Guide to

Ground Vehicle Operations

Tampa International Airport

A Comprehensive Guide to
Safe Driving on the
Movement Area

Revised.8682

The Aviation Authority conducts formal training for all personnel authorized with unescorted access to the movement areas at Tampa International Airport. The movement area includes all areas under direct control of the FAA Air Traffic Control Tower (ATCT), which includes the runways, safety areas, and taxiways. This training guide is a tool to familiarize individuals with the airport environment, safe driving techniques, proper procedures, and safety requirements for operating on the movement area. Learning the correct procedures for driving on the movement area is critical to airport safety and efficiency.

The Federal Aviation Administration continues to lead an industry-wide effort to improve runway safety and prevent incursions through increased education, training, and awareness.

A runway incursion is defined as "Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft."

In order to minimize the risk of runway incursions, it is extremely important that all persons conducting movement area operations have a thorough understanding of the airfield layout at Tampa International Airport (TPA) as well as

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familiarity with applicable ATCT & Surface Movement Guidance Control System (SMGCS) procedures, which will be explained later in this training guide.

Runway incursions are primarily caused by an error in one or more of the following areas:

- ✈ Pilot, ground vehicle, or controller communications
- ✈ Airport familiarity
- ✈ Loss of situational awareness

When driving on the airfield, vehicle operators must always be aware of their location and the meaning of all pavement markings, lighting, and signage.

Many runway incursions occur as a result of a lack of situational awareness by the vehicle operator. Situational awareness is an individual's perception of what is going on around them and their perceptions of where they are in relation to where they think they are. The higher the situational awareness of a ground vehicle operator, the lower the risk of a runway incursion or other surface incident.

Air Operations Area (AOA) Access Requirements:

Personnel whose job function requires unescorted access to the movement area MUST possess or be escorted by a person possessing an Airport Security Identification Display Area (SIDA) badge with a Movement Area Trained (MAT) endorsement printed on the upper right-hand corner. The scope and meaning of ground vehicles have been expanded to include non-flight crew aircraft movements, such as repositioning an aircraft by an airline mechanic.

There are three distinct levels of MAT endorsements that are utilized at TPA. Each level delineates the access of the individual and the associated training requirements.

Level 1 – Airfield Operations
Level 2 – Airfield Maintenance, Airport Rescue & Fire Fighting, FAA Tech Ops and other personnel identified by the Chief Operating Officer or designated representative
Level 3 – Individuals trained to taxi/tow aircraft within the movement area

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All personnel who initially obtain a MAT endorsement or are getting their endorsement renewed will be required to complete the movement area training program that aligns with their job function (pages 31-35). For safety, all personnel who operate in the AOA shall wear a high-visibility safety vest while working outside of vehicles.
Personnel whose job function requires access to the Movement Area must meet the following requirements:

- Operational needs approved by the Aviation Authority to access the movement area.
- Successful completion of all training requirements.
- MAT and authorized to operate in the movement area.
- Two-way radio capable of communications with ATCT or be escorted by an authorized operator with two-way communications.
- Operating a rotating beacon.
- A valid driver's license
- All level 2 and level 3 MAT personnel are required to notify Airfield Operations of all instances of access to the movement area by calling the Airport Operations Center (813)-870-8770.

The ***TPA Guide to Ground Vehicle Operations*** was created for you, the driver of a tug, ARFF truck, Maintenance, or other airport vehicle. This guide is not intended to provide comprehensive coverage of everything there is to know about surface safety. Rather, it focuses on five areas that are most important.

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Towered Airports

Aviation Phraseology

Additional Information

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Each section identifies safety measures and information that will help you maintain situational awareness while on the airfield. "Situational awareness" is defined as being aware of your location on the airfield and how that location relates to your destination, other vehicles and aircraft. It can be maintained consistently by:

- ✈ Understanding and following Air Traffic Control (ATC) instructions and clearances.
- ✈ Using an airport diagram.
- ✈ Knowing the meaning of the visual aids available on the airport, such as airfield markings, signs, and lights.

Maintaining situational awareness will help you avoid errors that lead to runway incursions. Runway incursions are a serious safety concern, and it doesn't take much to be involved in one. Incursions and collisions have included all types of commercial, military, and private aircraft as well as GROUND VEHICLES. Some have resulted in fatalities. All employees who operate vehicles or motorized equipment on airports have key responsibilities in these safety efforts, as this guide outlines.

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All airports, regardless of whether they serve air carriers or general aviation, have common elements. It is important to remember that both a driver and vehicles are considered obstacles to aircraft utilizing the airport, and must operate within the guidelines of these specific areas. Airports are different from any other environment. Each person operating in the movement area must make safety our first priority. Driving in the movement area is a privilege, not a right, and violating any rules or regulations may result in your driving privileges being suspended or revoked.

Runway Safety Area

The Runway Safety Area (RSA) is a defined area surrounding the runway, measured from both the runway ends and centerline. Similar to the shoulder of a highway, the RSA is designed to support aircraft during emergency situations—such as undershooting, overrunning, or veering off the runway. To maintain safety, the RSA must remain clear of all vehicles, equipment, and pedestrians whenever aircraft are taxiing, taking off, or landing. Access to this area is restricted and requires proper authorization and clearance by Air Traffic Control Tower (ATCT).

The Runway Safety Area (RSA) is identified by a hold line, also known as a holding position marking, which is painted in yellow on taxiway surfaces and paired with a corresponding holding position sign. This sign features a red background with white characters.

The dimensions of the RSA vary based on the tail height and wingspan of the largest aircraft authorized to operate at the airport. Depending on these factors, the RSA may extend up to 280 feet from the runway centerline and as much as 1,000 feet beyond the runway ends.

Runways

Runways are identified by numbers that correspond to their magnetic compass direction. Each number represents the runway's magnetic azimuth, rounded to the nearest 10-degree increment of the runway centerline. This azimuth is measured clockwise from magnetic north, based on the direction of approach. For example, a runway aligned with a magnetic heading of 190 degrees is designated as Runway 19 (pronounced "one niner," not nineteen). The opposite end of that same runway, facing 010 degrees, is designated Runway 1. These runway designation numbers are painted in white and are located at each end of the runway.

Runways that are aligned parallel to each other share the same numeric designation but are further distinguished by the use of Left (L), Center (C), and Right (R). The runway number, along with the appropriate letter, is painted at each end of the runway.

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At Tampa, there are two parallel runways aligned on a 010/190 degree heading. These are designated as Runway 1L/19R (pronounced “one left/one niner right”) and Runway 1R/19L (pronounced “one right/one niner left”). Tampa also has a crosswind runway aligned on a 100/180 heading. These are designated as runway 10/28 (Pronounced “one zero/two eight”)

Aprons/Ramps

Aprons, also known as ramps, are areas where aircraft park, load, and unload. Your duties may require you to operate a vehicle on the apron, so it is important to remain alert for both moving and parked aircraft.

When working around parked aircraft, always maintain a safe distance. In addition to causing costly damage—such as nicks and dents that can impact an aircraft’s airworthiness—you also risk personal injury and vehicle damage, particularly when an aircraft starts its engines. This hazard is known as jet blast or prop wash, and in some cases, it has been strong enough to overturn vehicles.

Drivers should also be aware of the rotating red beacon(s) on an aircraft, typically located on the underside. An illuminated beacon is a clear indication that the aircraft’s engines are about to start or are currently running.

Runway Markings are WHITE

Runways have white numbers on each end, centerline stripes down the middle, and may have white lines along the edges. Runways that are served by an instrument approach will have more elaborate markings, such as those shown in Figure 1.

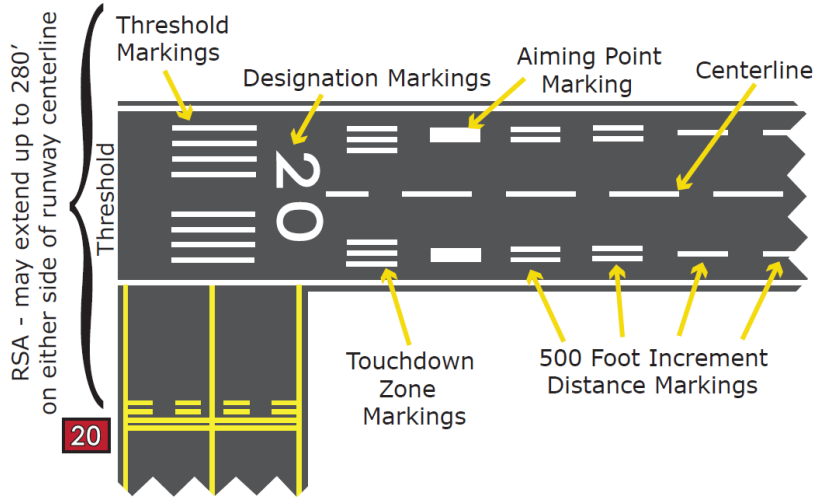

Figure 1 – Runway Markings (not to scale).

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Taxiway Markings are YELLOW

Taxiways are designated paths used by aircraft to move between the apron (ramp) and the runway. While they may appear similar to runways, taxiways are typically narrower. Unlike runways, which are identified by numbers, taxiways are designated using letters or combinations of letters and numbers.

Airport Layout Plan Familiarization

The most effective way to ensure both personal safety and the safety of others is to develop a strong understanding of the airport's layout and configuration. Take time to thoroughly review all available airfield maps and reference materials. If your role requires access to the airfield—even on an occasional basis—ensure you are familiar with these materials before arriving on site. The airport environment is dynamic, and conditions can change frequently, making up-to-date maps and current information essential for safe operations.

For operational purposes, Tampa International Airport (TPA) is divided into two primary areas: the Movement Area and the Non-Movement Area.

Movement Area

The movement area includes all airfield surfaces under the control of the Federal Aviation Administration Air Traffic Control Tower (ATCT), specifically runways and taxiways. Operators are responsible for maintaining continuous awareness of their exact location in relation to these surfaces and must comply with all controller instructions precisely as issued.

Non-Movement Area

The non-movement area includes ramps, service roads, and maintenance areas. These areas do not require radio communication with the ATCT. Ramps are designated locations where aircraft are parked, loaded, unloaded, and serviced.

Operators must exercise extreme CAUTION and give undivided attention to surroundings while operating a vehicle or walking in these areas due to high levels of aircraft activity and extensive use of ground support equipment.

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BEST PRACTICES FOR SAFE DRIVING

On the Movement Areas

- ✈ Together, runways and taxiways are known as the *MOVEMENT AREAS* of the airfield.
- ✈ Airport diagrams provide the layout and designations of runways and taxiways, show the location of major facilities, and are essential to navigating the airfield surface. Always have a current airport diagram in your vehicle.
- ✈ If you are required to drive on or work in areas adjacent to taxiways, be aware that aircraft wings and engines may extend over these areas. ATC approval is typically required to operate in these areas.
- ✈ If you become uncertain of your location on the airport movement area, **STOP** and immediately contact ATC for help.
- ✈ Know your airfield markings, signs, and lighting (as outlined in the next section). Be careful not to hit taxiway edge lights.

Around Aircraft

- ✈ Aircraft cockpit windows have a limited viewing area. It can be difficult or impossible for pilots to see vehicles and pedestrians, particularly behind the wings or under the nose of the aircraft.
- ✈ Always yield the right-of-way to moving aircraft. Do not assume the pilot will see you, especially in busy areas like aprons/ramps where pilots are busy with preflight checks.
- ✈ If a pilot is about to start the engine or the engine is running, the aircraft's red rotating beacon(s) should be turned on as well.

Nighttime Driving

If you are required to drive on the airport at night, on your first couple of trips take someone along who is very familiar with the airfield. The airfield looks completely different at night and extra caution should be used.

During Construction

- ✈ Exercise increased vigilance when operating on the airfield during construction activities.
- ✈ Be aware that normal driving routes may be altered, and runways or taxiways may be closed.
- ✈ Anticipate changes such as displaced or relocated runway thresholds and the designation of new hot spots.
- ✈ Prior to operating—especially in rescue vehicles—review your planned route against current construction areas to ensure safe and compliant movement.

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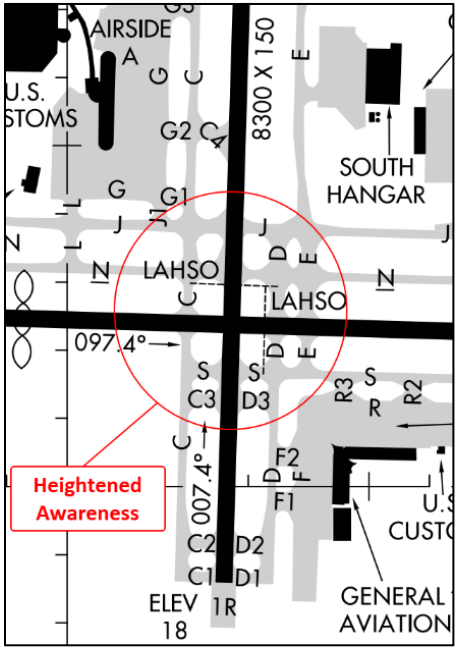
Hot Spots

The International Civil Aviation Organization defines a hot spot as a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, where heightened attention by pilots and vehicle operators is required. These areas are typically associated with complex or confusing taxiway/taxiway or taxiway/runway intersections.



As a vehicle operator, it is important to be familiar with these locations and exercise extreme caution when operating in or near them. Airport diagrams will often, though not always, identify designated hot spots. Always ensure you are using the most current diagram, as hot spots remain charted until the associated risk has been mitigated or eliminated.

While the FAA has not designated any official hot spots at TPA, there is an area that warrants heightened awareness by vehicle operators.

Airfield Dimensions

Tampa International Airport (TPA) is served by three runways and a highly efficient network of parallel and intersecting taxiways. While there are three physical runway surfaces, each operates in two directions depending on wind conditions and operational requirements.

Runways at TPA:

- ✈ 1L/19R — 11,002’ x 150’ (Concrete/Grooved)
- ✈ 1R/19L — 8,300’ x 150’ (Concrete/Grooved)
- ✈ 10/28 — 6,999’ x 150’ (Asphalt/Concrete/Grooved)

Several primary taxiways provide access between the runways and ramp areas. Taxiway designations often help indicate their relative location on the airfield.

North–South Taxiways:

- ✈ Taxiways Whiskey, Charlie, and Echo run north–south.
- ✈ Taxiway Whiskey parallels Runway 1L/19R on the west side of the airfield.
- ✈ Taxiway Echo parallels Runway 1R/19L on the east side.
- ✈ Taxiway Charlie runs between Whiskey and Echo, centrally located and also parallel to Runway 1R/19L.

East–West Taxiways:

- Taxiways November and Sierra run east–west, parallel to Runway 10/28.
- Taxiway November is located north of Runway 10/28.
- Taxiway Sierra is located south of Runway 10/28.

Connector and Key Taxiways:

- Taxiway Juliet is located south of the terminal and crosses over the parkway between Runways 1L/19R and 1R/19L. It serves as a primary junction connecting all runways.
- Taxiways Alpha and Bravo are located north of the terminal and run east–west between Runways 1L/19R and 1R/19L.

Taxilanes:

- Taxilane Golf (east side) and Taxilane Victor (west side) follow the movement area boundary around the terminals and gates.
- Aircraft operate on taxilanes similarly to taxiways; however, communication with the Federal Aviation Administration Air Traffic Control Tower (ATCT) is not required while operating within these non-movement areas.

SIGNS AND MARKINGS

As a driver, it is essential to understand the meaning of airfield signs and pavement markings, as they serve as critical navigational aids. In many cases, the information displayed on signs is also painted directly on the pavement for added visibility and guidance. An overview of the most common signs and markings is provided on the following pages.

Runway Holding Position Marking

The runway holding position marking is painted in yellow on taxiway pavement and is typically collocated with a runway holding position sign. It serves as the airfield equivalent of a stop sign. As you approach a runway, you will observe two solid yellow lines followed by two dashed yellow lines. Operators must STOP prior to the solid lines and must not proceed beyond them without explicit clearance from Air Traffic Control (ATC). To ensure adequate maneuvering space without inadvertently crossing hold position markings without clearance, position your vehicle well short of the markings and associated signage.

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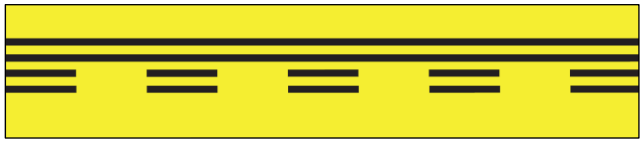
When exiting a runway, you will encounter the same markings; however, you will be approaching from the dashed-line side. To be considered clear of the runway, your vehicle must fully cross both the dashed and solid lines.

Do NOT cross the **Runway Holding Position Marking** without receiving clearance from the ATCT

Runway Safety Area (RSA) Boundary Sign

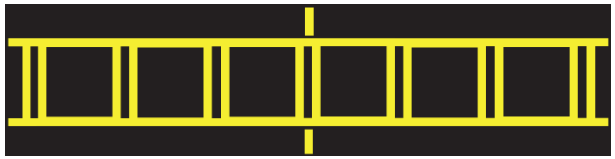
This sign features a yellow background with black markings and is visible only when exiting the runway. It is commonly used at towered airports where ATC may instruct pilots or operators to report "clear of the runway." This report should be made once the aircraft or vehicle has passed this sign, confirming it is fully outside the Runway Safety Area.



Runway Holding Position Sign and Markings

The runway holding position sign may be displayed as a vertical sign and/or painted on the pavement. It features white characters on a red background. This sign is typically collocated with the painted holding position markings at taxiway and runway intersections.

ILS Critical Area Holding Position Signs and Markings may appear as a sign and/or as a painted surface marking. These identify the boundary of the runway's ILS critical area. Operators must hold short of this area when instructed by ATC to ensure the integrity of instrument landing system signals and to maintain safe aircraft operations.



ILS critical area holding position markings appear on the pavement as a yellow "ladder-style" marking that extends across the full width of the taxiway. These markings are typically accompanied by an ILS holding position sign featuring white characters on a red background. Operators must hold short of this area when instructed by ATC to protect the integrity of the ILS signal and ensure safe aircraft operations.

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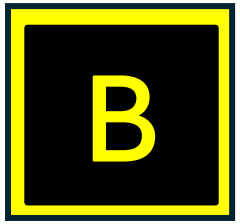
Non-Movement Area Boundary Markings

These markings consist of one solid yellow line and one dashed yellow line, separating *the non-movement* area from the *movement area* on the airfield.

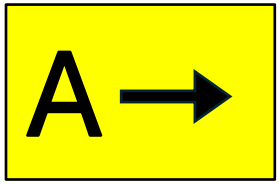
Do NOT cross the Non-**Movement Area Boundary Marking** without receiving clearance from the ATCT when positioned on the solid line side (the non-movement area).

Location Signs and Markings Black background with yellow letters and/or numbers. These signs and surface-painted markings indicate your location.



REMEMBER: BLACK SQUARE, YOU'RE THERE.

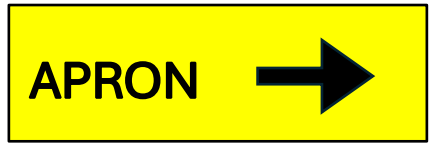
Taxiway Direction Signs and Markings feature a yellow background with black characters and indicate the direction to a connecting taxiway leading off a runway or from an intersection.



REMEMBER: YELLOW ARRAY, LEADS THE WAY.

Destination Signs

Destination signs feature a yellow background with black lettering and provide direction to specific locations on the airfield. These signs are typically positioned along taxiways and guide operators to destinations such as parking areas, terminals, or other airport facilities.



Enhanced Taxiway Centerlines

Enhanced taxiway centerlines consist of dashed lines painted on both sides of the standard taxiway centerline. These markings extend up to 150 feet from the runway holding position marking. Their purpose is to provide an additional visual cue to aircraft and vehicle operators that they are approaching a runway safety area, reinforcing the need for heightened awareness and readiness to hold short.

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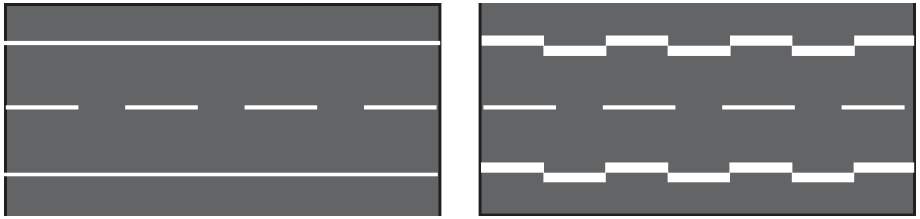
Aprons/Ramps

Aprons, or ramps, include markings for aircraft parking positions. At Tampa International Airport, aprons feature designated markings for vehicle operations. When present, vehicles must remain within these marked roadways to ensure safe and organized movement. Additionally, taxiway markings may extend onto the apron to define aircraft routes to gates and parking areas.



Examples of vehicle surface markings: roadways bounded by "zipper" markings are also used by aircraft.

LIGHTING

Airports utilize a variety of lighting systems to support aircraft operations, particularly during periods of low visibility or nighttime conditions. These lighting combinations are designed to enhance situational awareness, improve navigation, and ensure safe movement on runways, taxiways, and other operational areas.

Runway Edge and Centerline Lights

Runway edge lights are typically white. On instrument runways, the last 2,000 feet—or half the runway length, whichever is less—change to yellow to indicate a caution zone for landing aircraft. Runway centerline lights begin alternating red and white 3,000 feet from the runway end, transitioning to solid red for the final 1,000 feet. These color changes provide critical distance remaining cues to pilots during landing.

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Taxiway Edge Lights or Reflectors

Taxiway edge lights or reflectors are blue in color and are used to define the edges of taxiways during periods of darkness or reduced visibility. These lights help pilots and vehicle operators clearly identify taxiway boundaries and maintain proper alignment while navigating the airfield.

Taxiway Centerline Lights

Taxiway centerline lights are green and indicate the center path of the taxiway. Lead-on and lead-off lights alternate between green and yellow, providing a visual cue that you are entering or exiting the runway environment. At TPA, taxiway centerline lighting is limited in use—if you encounter these fixtures, it indicates you are operating on the west side of the airfield, which is the only area where they are currently installed.

Runway Guard Lights

Runway guard lights are flashing yellow lights that may be either in-pavement or elevated. They are installed at runway holding positions to provide a clear visual warning that you are approaching a runway, helping prevent inadvertent runway incursions.

Vehicle Light Gun Signals

Air traffic controllers have a backup method of communication in the event of radio failure. If possible, you should try to exit the movement area **without crossing any runways**. Many areas on the airfield allow access to a service road. If it is not possible to exit the area without entering a runway, try to contact Airport Operations by either cell phone or radio. Airport Operations will either obtain and relay a clearance from ATCT or will respond to escort the vehicle and/or personnel off the airfield.

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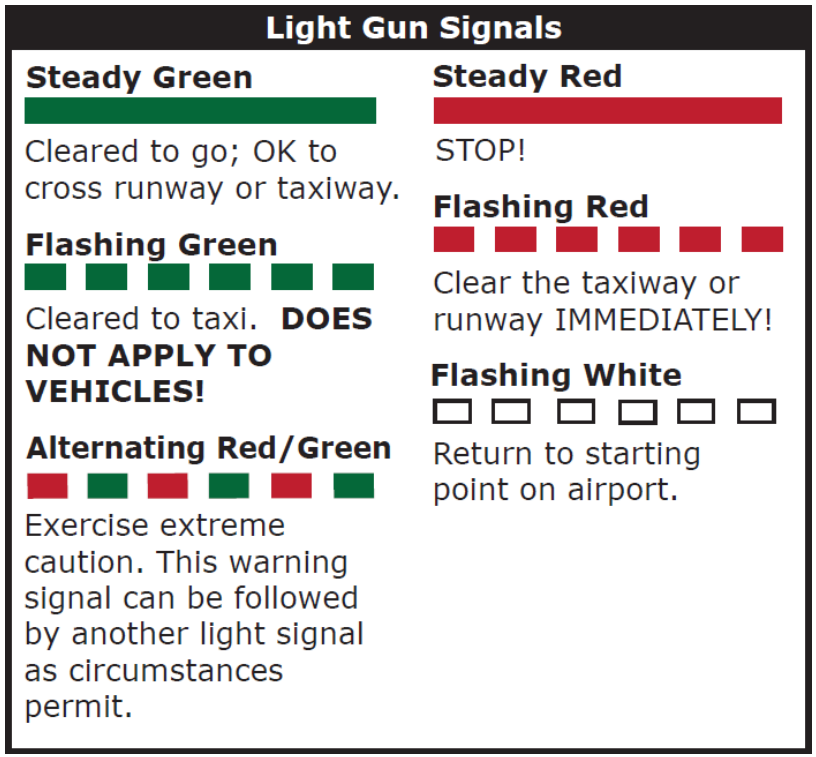
Using a light gun, controllers can transmit instructions through a series of colored light signals to pilots and vehicle operators. A radio failure does not authorize movement without proper clearance.

If radio communication is lost while operating on a runway or taxiway:

- ✈ Turn your vehicle to face the control tower.
- ✈ Flash your headlights to signal your position.
- ✈ Wait for instructions via the light gun.
- ✈ Be patient—controllers may be managing other aircraft or areas of the airfield.
- ✈ If no signal is received, attempt contact on another radio frequency or call the tower directly using a cell phone. Keep the tower's phone number readily available for emergency



TOWERED AIRPORTS

Tampa International Airport (TPA) has an Air Traffic Control (ATC) tower. All pilots and vehicle operators must obtain permission from ATC before entering any movement area, including runways and taxiways.

As a vehicle operator, you are required to have explicit authorization from ATC prior to accessing any part of the movement area. Additionally, you must use a functioning two-way radio to communicate with ATC and receive instructions while on the Movement Area.

Before transmitting on the ground radio frequency, take a moment to think through your message and wait at least five seconds to ensure you do not interfere with another transmission. Always acknowledge all instructions received from the control tower, remain aware of ongoing radio communications, and avoid interrupting others. Regardless of traffic volume or frequency congestion, never hesitate to request clarification if you are unsure of ATC instructions.

Radio Communication Procedures

- ✈ Ensure the availability of a radio capable of transmitting and receiving on the airport's ground control frequency. Perform a "radio check" to assess your radio's operability at the start of each shift.
- ✈ Each vehicle must have a designated call sign and be properly marked and lighted for identification.
- ✈ Use standard Air Traffic Control (ATC) phraseology at all times—avoid citizen's band or law enforcement "ten" codes.
- ✈ Before transmitting, think through your message. Be prepared to clearly state your call sign, current location, and intentions.

The "Aviation Terminology" section on page 18 provides a list of air traffic control terms and phrases along with their definitions, and it is important to understand these before operating on the airfield. While radio communications may seem challenging at first, they become easier with practice. If you are ever unsure of what a controller has said or do not fully understand an instruction, ***request clarification by transmitting*** **"SAY AGAIN."** Even during busy operations, controllers would much rather repeat or clarify instructions than risk a misunderstanding that could lead to a runway incursion. Never proceed with uncertainty, assuming the instructions will become clear and always confirm before continuing.

Advance Coordination

When contacting the tower prior to an operation, you will receive instructions on how to proceed. Ensure you clearly understand your assigned route, as well as any stopping points and holding positions.

If you are unsure of your route or require additional guidance, you may request **"progressive"** taxi instructions from the controller, which provide turn-by-turn directions.

When operating on the movement area, you must communicate on and continuously monitor the designated frequency. Any communication with ATCT should follow a clear and standardized sequence, including your call sign, current location, request, or intentions.

Examples:

Whom am I calling?

Tampa Ground.

- ✈ Who am I?

  Ops 3/Aircraft Tail #/Super Tug/ARFF 4/Maintenance 27.
- ✈ Where am I?

  Taxiway Charlie 7.
- ✈ What is my intent?

  Request permission to cross runway one right at taxiway *Charlie 7* and proceed to the FedEx ramp.

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The controller will either approve or deny your request or issue specific instructions. For example, "Ops 3, proceed as requested. Hold short of Runway One Right." You must acknowledge all instructions received, such as, "Ops 3, holding short of Runway One Right."

If the controller issues any holding instructions, you are required to read back the holding instructions word for word.

An example of a request to enter the movement area is as follows:

Operator: "Tampa Ground, Ops niner, request permission to enter the movement area at Taxiway Golf tree and proceed south on Charlie. Will give way to all aircraft and hold short of all runways."

ATCT Ground Control: "Ops niner, Tampa Ground, proceed as requested."

Operator: "Proceeding as requested, Ops niner."

An example of a request to cross Runway 19L at Taxiway Charlie 1 is as follows:

Operator: "Tampa Ground, Maintenance 25, at Taxiway Charlie 1, requesting to cross Runway 19 Left."

ATCT Ground Control: "Maintenance 25, hold short Runway 19 Left at Taxiway Charlie 1, landing traffic.'

Operator: "Holding short Runway 19 Left at Taxiway Charlie 1, Maintenance 25."

TPA Radio Frequencies

At TPA, there are two primary radio frequencies used for airfield operations: Ground Control and Tower. The Tampa Tower frequency (119.5) is used to coordinate aircraft takeoffs and landings, while the Tampa Ground Control frequency (121.7) is used to direct all aircraft and ground vehicles operating within the movement area.

For example, arriving pilots communicate on the Tower frequency during approach and landing. Once the aircraft has landed and exited the runway, they switch to Ground Control to receive taxi instructions to their assigned gate.

Ground vehicles and non-flight crewed aircraft must use the Ground Control frequency (121.7) while operating in the movement area, unless otherwise directed by Air Traffic Control (ATCT).

GROUND	121.7
TOWER	119.5
ATIS	126.45
DISCRETE	121.35

AVIATION TERMINOLOGY

This section provides a glossary of terms commonly used in ground and surface operations. For a more comprehensive listing of Air Traffic Control (ATC) phraseology, refer to the FAA Aeronautical Information Manual (AIM), which is available online at:
http://www.faa.gov/air_traffic/publications/atpubs/aim/

Acknowledge - Let me know that you have received and understood this message.

Advise Intentions - Tell me what you plan to do.

Affirmative - Yes.

Confirm - My understanding of your transmission is _____ : Is that correct?

Correction - An error has been made in the transmission and the correct version follows.

Final - Commonly used to mean that an aircraft is on the final approach course or is aligned with a landing area.

Go Ahead - Proceed with your message. Not to be used for any other purpose.

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Aviation Phraseology

Hold or Hold Position - Stay in place where you are currently located.

Hold Short of… - Proceed to, but hold short of a specific point and maintain appropriate distance to avoid interfering with other traffic. With respect to runways, always stop at the runway holding position markings unless otherwise directed by ATC. A readback confirmation to ATC is required whenever a **"hold short"** instruction is given.

Line Up and Wait (LUAW) - This phrase has replaced the "Position and Hold" instruction by a controller to direct a pilot to enter the runway and await takeoff clearance.

Negative - No; Permission **NOT** granted; That is not correct.

Proceed - You are authorized to begin or continue moving.

Read Back - Repeat my message back to me.

Roger - I have received your last transmission; but **NOT** to be used to answer a question requiring a “yes” or “no” response (see Affirmative, Negative).

Say Again - Repeat what you just said.

Stand By - Wait for further information, as in “stand by for clearance”.

Unable - Indicates inability to comply with a specific instruction, request or clearance.

Verify - Request confirmation of information.

Without Delay - Follow instructions expeditiously, specifically, and safely.

Wilco - I have received your message, understand it and will comply.

Aviation Phonetic

Because some letters and numbers may sound similar, the following list will reduce confusion. For example, Taxiway B would be referred to as Taxiway Bravo, and Runway 29 is Runway Two Niner. As a vehicle driver, commit this phonetic alphabet to memory.

A - Alpha	M - Mike	Y - Yankee
B - Bravo	N - November	Z - Zulu
C - Charlie	O - Oscar	0 - Zero
D - Delta	P - Papa	1 - Wun
E - Echo	Q - Quebec	2 - Too
F - Foxtrot	R - Romeo	3 - Tree
G - Golf	S - Siera	4 - Fow-er
H - Hotel	T - Tango	5 - Fife
I - India	U - Uniform	6 - Six
J - Juliet	V - Victor	7 - Sev-en
K - Kilo	W - Whiskey	8 - Ait
L - Lima	X - X-ray	9 - Nin-er

Laws, Regulations, and Local Ordinances Governing Vehicular Traffic

Traffic Control

All ground vehicle operators are required to obey all posted regulatory signs, traffic signals, and all instructions by ATCT, Airport Management, or TPA Law Enforcement Officers.

Speed Limits

Ground vehicles should operate on the Movement Area at a speed that is reasonable and prudent under the conditions concerning the actual and potential hazards existing.
There are posted speed limits for the following areas within the Non-Movement Areas:

- Baggage make-up areas – 5 mph
- Around parked aircraft – 5 mph
- Ramp areas/Vehicle Service Road – 15 mph
- Taxiway /Taxilane – 25 mph
- Runways – 35 mph

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Additional Information

All Operations (Ops) vehicles are equipped with GPS tracking through Samsara, including alerts for excessive speeds on taxiways and runways.

All personnel operating a ground vehicle on the Air Operations Area (AOA) must **yield the right-of-way to all aircraft at all times.**

Ground Vehicle Accidents

Any person operating a ground vehicle on the Air Operations Area (AOA) who is involved in an accident must immediately stop at the scene, or as close as possible without obstructing traffic. The operator must contact AOC, remain at the scene, and provide a full report to the investigating officer. Upon request, all relevant identification—such as an ID badge, permit, driver's license, or vehicle registration—must be surrendered to the investigating officer.

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Additional Information

Enforcement

Senate Bill 787, which became law on June 22, 1983, amended Florida Statute 316.003 (53) to extend the enforcement of Florida uniform traffic laws to airport areas even though these areas are not open for use by the general public for purposes of vehicular traffic.

This statute permits HCAA to enforce traffic regulations within the boundaries of TPA in areas such as runways, taxiways, ramps, parking lots, service roads, baggage make-up areas, and baggage tunnel drives.

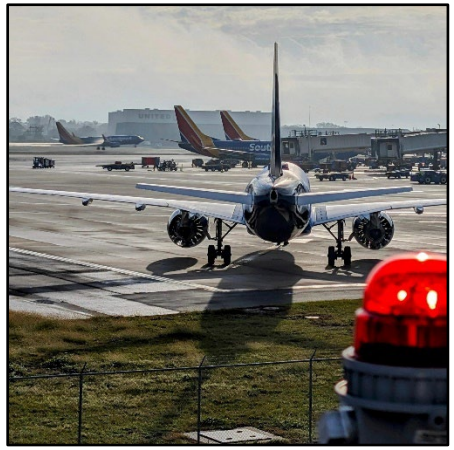
Safe Vehicle Operating Guidelines

Operating on the Movement Areas: Exercise extreme caution and maintain full situational awareness when operating a ground vehicle on the Air Operations Area (AOA). Be mindful that pilots have limited visibility of areas directly in front of, beside, and especially behind the wings of an aircraft. Never operate a vehicle under any part of an aircraft, and always comply with all airport rules and regulations. Yield to all moving aircraft at all times—whether under tow or power. Aircraft always have the right-of-way, with no exceptions.

Do not enter a runway or taxiway without prior approval from Air Traffic Control (ATCT). If operating on an active runway for an extended period, maintain periodic communication with the control tower to provide position updates and ensure continued awareness of your location.

Before entering or crossing a runway, look in both directions along the runway and scan the final approach path to enhance situational awareness.

Jet Blast and Engine Hazard Awareness



Always remain aware of jet blast when positioned behind an aircraft, and avoid jet intakes and exhaust outlets at all times. Even at idle power, engine intakes generate enough suction to pull in a person within 15 to 20 feet. Exhaust outlets can produce jet blast exceeding 100 miles per hour, with temperatures high enough to cause severe burns. This force is also strong enough to overturn ground vehicles operating on the ramp. Maintaining a safe distance from operating aircraft is critical to prevent serious injury and equipment damage.

Always assume engines can start up at any time. The red rotating beacon on an aircraft indicates that the engines are running or are about to be started. The jetway will be pulled away and wing walkers present when the aircraft is ready to push back.

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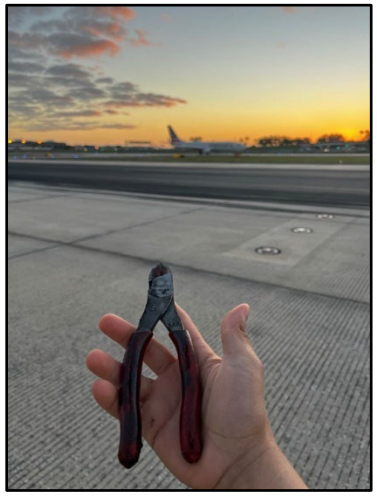
Additional Information

Foreign Object Damage (FOD)



Foreign object damage occurs anytime an aircraft engine ingests an object that causes damage to its internal components. An object the size of a 1/16th inch pellet can cause substantial damage, possibly even death, depending upon the realm of operations the ingestion takes place. An aircraft that ingests an object during a take-off procedure may not have enough pavement left to stop safely. Several incidents have occurred where the engine's fan blades severed critical hydraulic lines or damaged other engines.

FOD is everyone's responsibility!

If you see rocks or trash, whether it is paper, plastic, aluminum, nails, tools, etc., **it is your responsibility** to pick it up and dispose of it in a proper manner.

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Additional Information

SURFACE MOVEMENT GUIDANCE AND CONTROL PLAN

All individuals requesting access to the movement area must read and be familiar with TPA's Surface Movement Guidance & Control System Plan (SMGCS). This plan details aircraft & vehicle operations in visibility less than 1200' runway visual range (RVR) down to and including 600' RVR. There are specific requirements for Airport Operations, ARFF (Airport Rescue Fire Fighting), and non-flight crew aircraft movements, among others. All MAT-endorsed drivers must be familiar with these requirements.

Aircraft/Vehicle Repositioning During Low Visibility Conditions

Aircraft/Vehicles may be repositioned during low-visibility operations. Any of the low-visibility lighting or marked enhancements may be used to position or control aircraft repositioning at the discretion of the ATCT. The operator should state the aircraft's current location, planned new location, and desired route of taxi. The instructions of ATCT will be followed. Subsequent to initiating taxi, if the non-flight crew becomes unsure of its location or route of taxi, the non-flight crew will stop the aircraft and communicate with ATCT to verify their location and route of taxi. The aircraft will not resume taxi/movement without ATCT clearance. If communications fail, movement will cease and clear the runway surfaces. Participating non-flight crew and vehicle operators are required to have a copy of the TPA Low Visibility Taxi Routes Chart in their possession during low visibility operations. Further, air carriers will appropriately train affected personnel in low-visibility procedures.

SMGCS PLAN ADVISORY

When notified by the AOC that low visibility operations are probable:

- ✈ Air carriers will advise ramp and maintenance personnel.
- ✈ Restrict all non-essential vehicle/non-flight crew aircraft movements not directly related to servicing or departing aircraft.

SMGCS PLAN IMPLEMENTATION

Once notified by the AOC that low visibility operations have been officially implemented, air carriers shall, in addition to the advisory notification procedures, implement the following:

- ✈ Ensure that trained personnel equipped with tug, tow bar, and the necessary equipment are available for tow-in/tow-out service.
- ✈ Non-Flight Crew Aircraft Moving crews (if vital to the operations during low visibility conditions) will:

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Additional Information

- ✈ Follow ATCT instructions utilizing the TPA Low Visibility Taxi Route Chart
- ✈ Advise ATCT when holding short of the ILS critical areas for the purpose of crossing the runway.
- ✈ Advise the maintenance hangar and/or gate operations control when approaching the respective target areas.

SMGCS PLAN TERMINATION

When notified by the Airport Operations Center that low visibility operations are terminated, Air Carriers will advise all affected personnel.

SECURITY

Pursuant to regulations set forth in 49 CFR Part 1542 Airport Security, the Aviation Authority has adopted and agrees to enforce the provisions outlined in its Airport Security Program. The Security Program provides for the safety of persons and property traveling in air transportation against acts of criminal violence and aircraft piracy. A copy of the program is maintained at the Airport Security office of the Hillsborough County Aviation Authority. It is everyone's responsibility to maintain security at all gates and doors leading to the Air Operations Area (AOA). When a gate or door is in continuous use, surveillance is required to prohibit unauthorized entry; when not in use, the door or gate is required to be locked. If you see a gate left open, close it, and then report it immediately to the Airport Operations Center or Airport Police.

SUMMARY

The FAA continues to lead an industry-wide effort to improve runway safety and prevent incursions through increased education, training, and awareness. The AOA is divided into movement areas (runways and taxiways controlled by ATCT) and non-movement areas (ramps and service roads). At Tampa International Airport, the primary runways are 1L/19R, 1R/19L, and 10/28.

Standard airfield markings and lighting must be understood and followed: runway markings/lighting are white, while taxiway markings are yellow and lighting is blue. Operators must not cross non-movement boundaries or hold position markings without clearance from ATCT, treating these markings as mandatory stop points.

Aircraft always have the right of way. Personnel must use proper aviation phraseology, follow all speed limits and traffic laws, and remain vigilant of hazards such as jet blast and FOD. Familiarity with the airport's SMGCS Plan is essential, and all personnel share responsibility for maintaining airfield security at access points.

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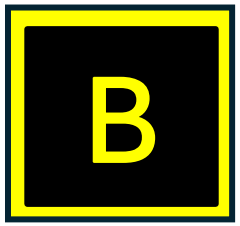
Airfield Signage, Markings, and Lighting Reference

Signage

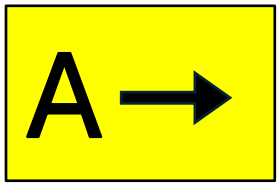
Runway Hold Position

ILS Position

Location Sign



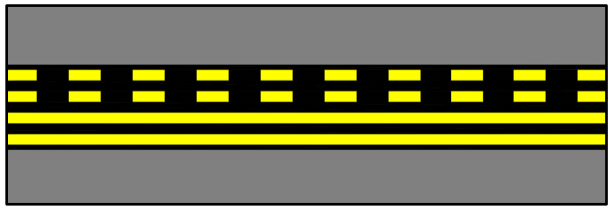
Direction Sign



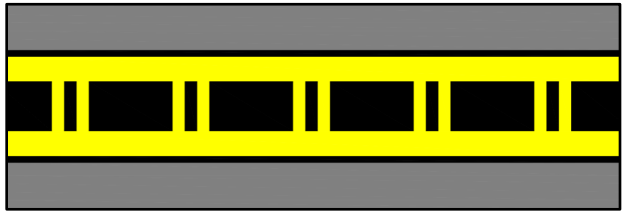
Destination Sign

Markings

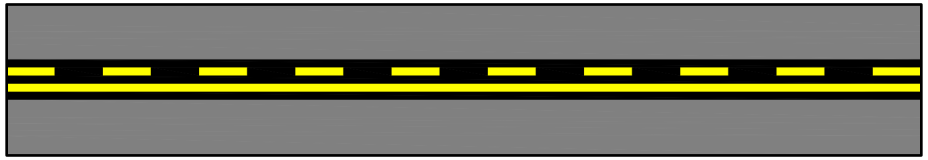
Runway Hold Position



ILS Hold Position



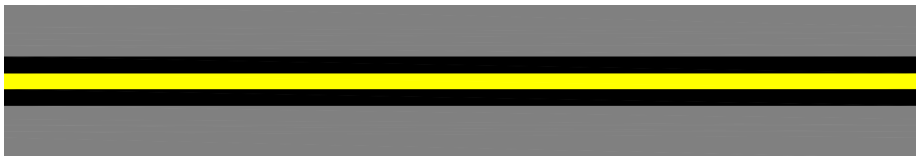
Non-Movement Boundary



Runway Centerline

Runway Edge Line

Taxiway Centerline



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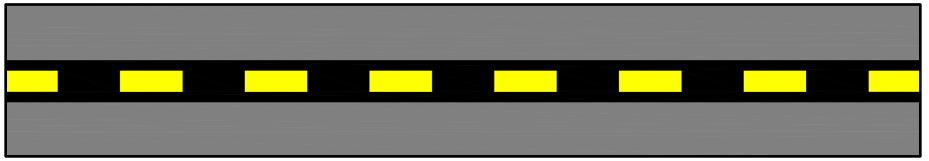
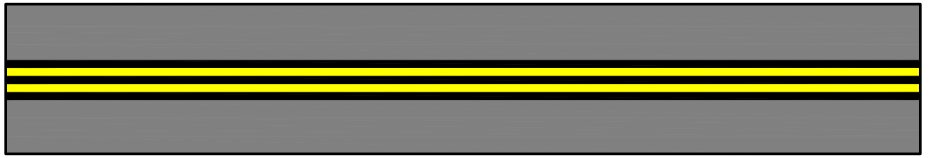
Airfield Signage, Markings, and Lighting Reference

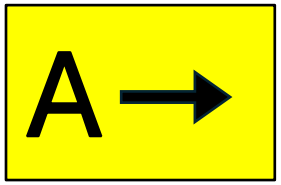
Taxiway Intermediate Hold Position



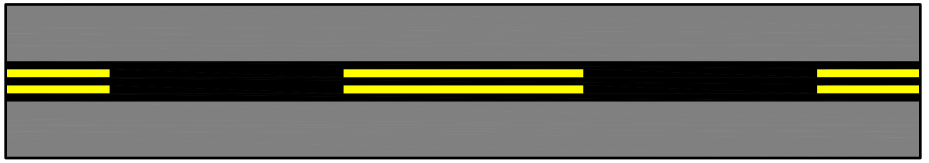
Taxiway Edge (Solid)



Surface Painted



Taxiway Edge (Dashed)



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Airfield Signage, Markings, and Lighting Reference

Lighting

Runway Edge

Elevated Runway Guard Lights (Wig Wags)

In-Pavement Runway Guard Lights

Taxiway Edge

EMERGENCY CONTACTS

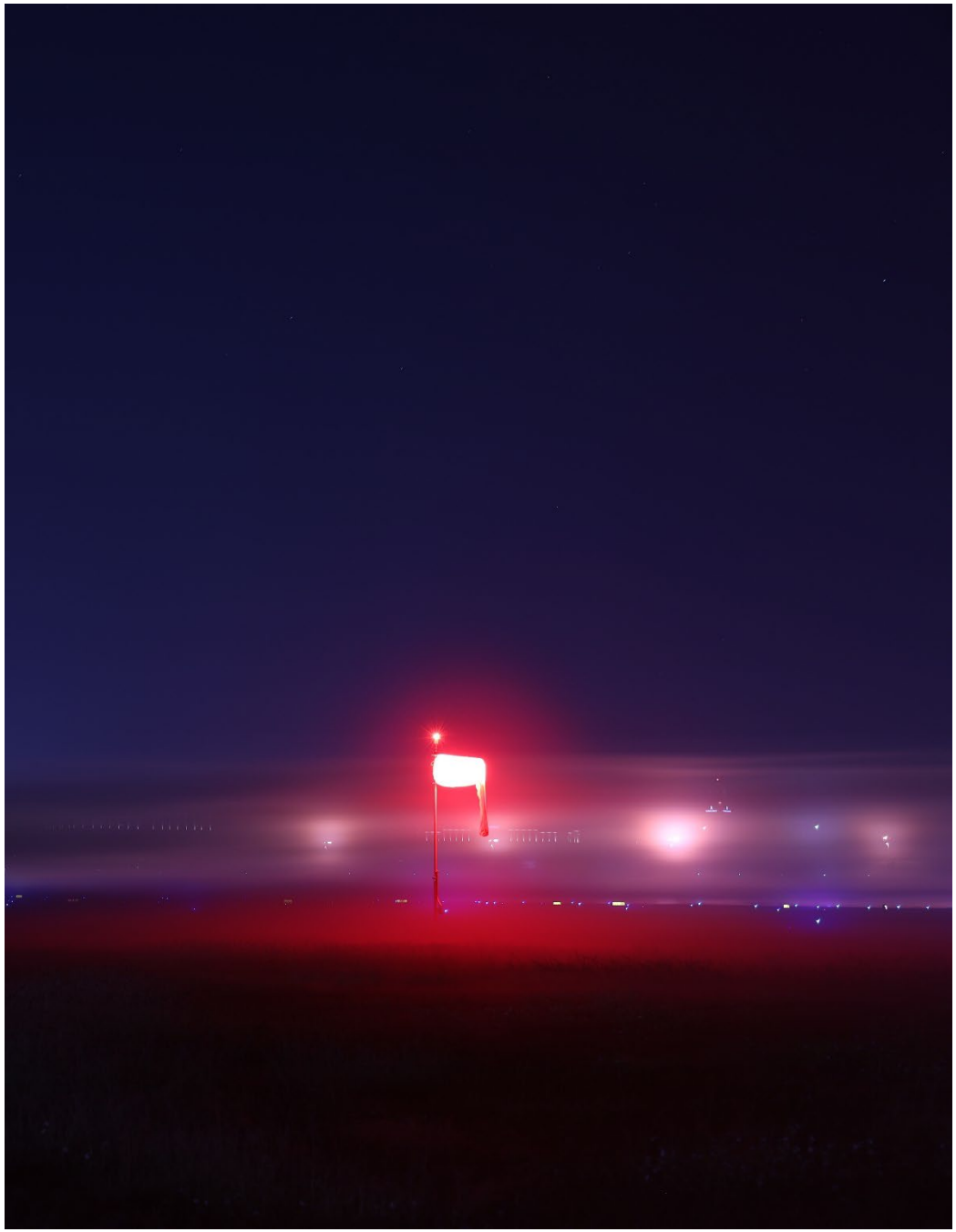
The following is a list of phone numbers to be used to report any emergency, suspicious activity, or abnormality. These numbers are monitored 24 hours per day.

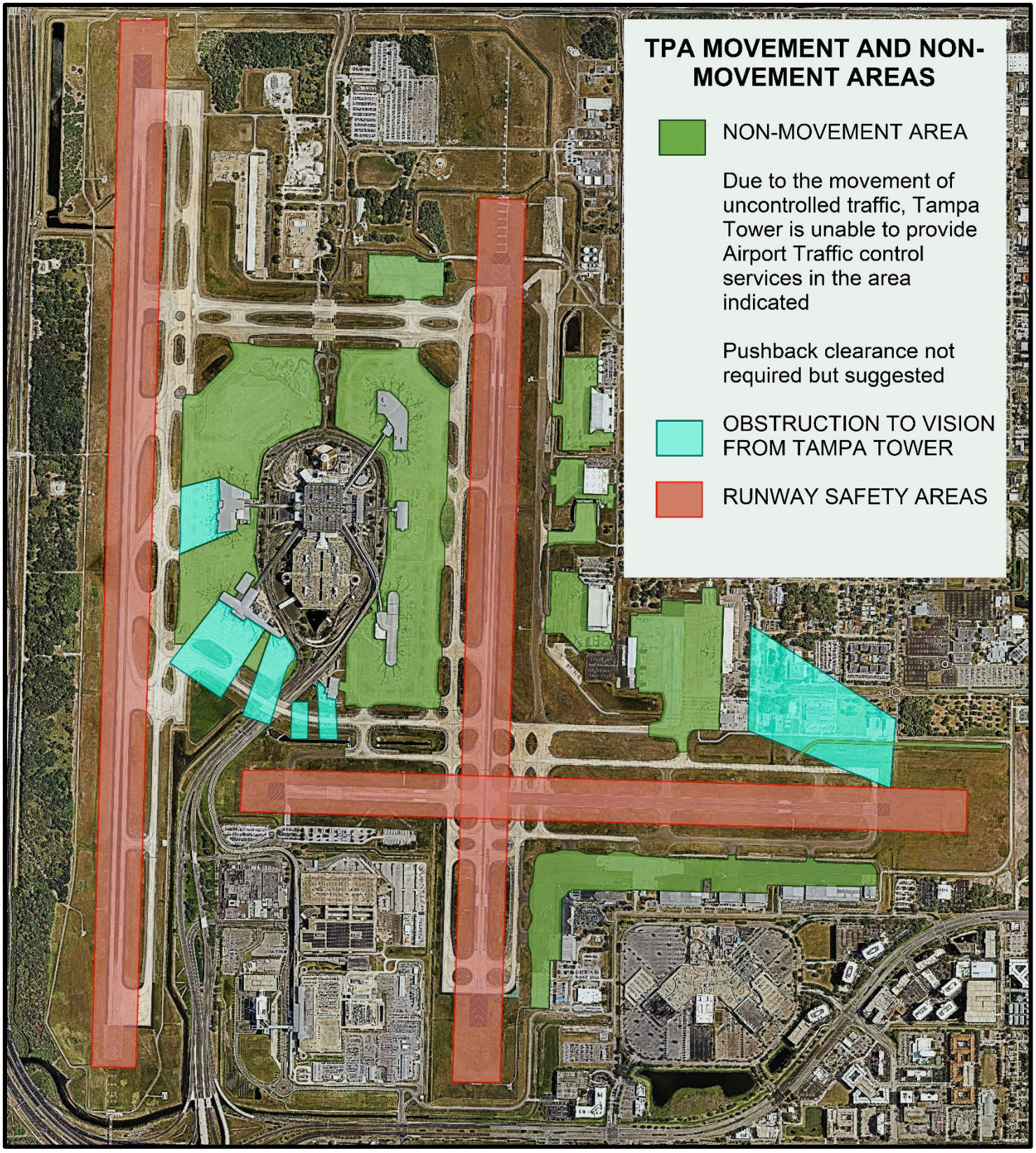
The 1st notification for any event should be made to the AOC.

Airport Operations Center (AOC)	**813-870-8770**
Airport Police	**813-870-8760**

Any suggestions for improving this guide should be directed to:

Tampa International Airport Operations
Department Manager, Airfield Operations
P.O. Box 22287 Tampa, FL 33622
(813) 870-8770
AirfieldOps@tampaairport.com




TPA MOVEMENT AND NON-MOVEMENT AREAS
NON-MOVEMENT AREA
Due to the movement of uncontrolled traffic, Tampa Tower is unable to provide Airport Traffic control services in the area indicated
Pushback clearance not required but suggested
OBSTRUCTION TO VISION FROM TAMPA TOWER
RUNWAY SAFETY AREAS